RESOURCE GUIDE

for the

INVESTIGATION

of

ENVIRONMENTAL CRIMES

Central Virginia
Environmental Crimes Task Force

September, 2002

CONTRIBUTORS

City of Chesapeake Fire & Police

Chesterfield County Fire & Police

Defense Supply Center - Richmond

Dept of Defense - Defense Criminal Investigative Service

Federal Bureau of Investigation

Ft. Lee - Fire

Hanover County Fire & Police

Henrico County Fire & Police

Norfolk City - Fire, Police & City Attorney

Richmond City Fire & Police

U.S. Environmental Protection Agency

Virginia Attorney General

Virginia Dept. of Environmental Quality

Virginia Division of Consolidated Labs

Virginia Department of Emergency Management

Virginia Air and Army National Guard

Virginia State Police - Bureau of Criminal Investigation

TABLE OF CONTENTS

PURPOSE AND SCOPE

The purpose of this document is to provide practical information for the investigation of potential environmental crimes. These crimes typically involve the intentional, knowing, reckless, or criminally negligent violation of environmental laws and regulations. Criminal liability for environmental violations can be incurred in the generation, treatment, transportation and/or disposal of pollutants. Criminal prosecution for environmental crimes may also be brought under several different parts of the Virginia Criminal Code.

The scope of this document is limited primarily to those activities that take place at the potential crime scene with a focus on evidence collection and preservation.

References to various state and federal laws that may be useful for the purpose of prosecuting environmental crimes are included as appendices.

The charts in Appendix 1 of this guide summarize many of the state environmental statutes typically encountered by law enforcement personnel who investigate and prosecute environmental crimes. However, the charts are intended as a reference guide only and they do not attempt to catalog all the applicable statutes or to describe all the regulatory requirements imposed.

The charts break the statutes into the following categories:

I. Air Pollution Control Law and Related Statutes
II. Waste Management Statutes
III. State Water Control Law and Related Statutes
IV. Mining
V. Pesticides

Every effort has been made to reflect current amendments to the statutes as of the most recent publication of this guide, but the current edition of the Code should also be consulted. It is strongly recommended that you consult the actual statutes if you have a case that you believe may involve environmental criminal conduct.

Additional offenses may lie under applicable local ordinances. Consult your city or county attorney's office for additional details.

INITIAL RESPONSE CONSIDERATIONS

Upon report of an incident, determine if there are any possible immediate threats to public safety. This will determine the immediacy of the response and the number of personnel and apparatus necessary.

Upon arrival, an initial site assessment should be conducted to determine if any containers present are either stressed or already breached and, if breached, the amount of material that has been or is being released. Stressed containers may exhibit some of the following characteristics:

- Swollen sides or ends
- Noise (such as metallic pinging, relief valve hissing)
- Crystallization on the outside of the container

SPECIAL NOTE: High ambient temperatures can increase internal container stress.

Personnel should avoid approaching or moving any containers unless absolutely necessary. Instead, efforts should be made to ensure public safety and to protect potential criminal evidence at the scene.

If an approach is made, detection and monitoring devices should be employed, and personnel should wear appropriate levels of personal protective equipment. These actions are critical not only for personal safety but also to ensure the credibility of any subsequent investigation.

Initial arriving personnel should be alert for container identification such as shipping labels and hazard class labels that may be displayed on containers. An absence of labels or other markings DOES NOT always indicate a safe situation.

Notification should be made to the local hazardous materials coordinator and the appropriate Hazardous Materials Officer for the Virginia Department of Emergency Management. Contact with a HAZMAT Officer can be made through the Virginia Emergency Operations Center at (800) 468-8892.

SPECIAL NOTE: The scene should be photographed as soon as practical.

DETERMINING THE STATUS OF MATERIALS

Upon discovery of a potential environmental crime scene, contact should be made with the property owner or tenant to determine their knowledge of the material in question. If the property owner is unknown, local tax assessor records may provide clues as to ownership.

It is possible that all items in question belong to the property owner or tenant and do not represent an environmental crime scene. Instead, the situation may represent an improper and/or potentially illegal storage of hazardous material or hazardous waste.

If the materials involved are believed to present an immediate threat to public safety, fire and law enforcement officials should access the site as they would for any other type of similar situation. The Code of Virginia, Section 27-37.1, provides the authority for access under these circumstances. Refer to Appendix 1 for additional information on this topic.

In situations where there is no apparent immediate threat, access should be delayed until notification can be made to the appropriate local authorities, such as law enforcement, the zoning or code official, or the hazardous materials coordinator. Notification should also be made to the appropriate regional office of the Virginia Department of Environmental Quality. Contact with VDEQ can be made through the Virginia Emergency Operations Center at (800) 468-8892.

Once it is determined that the situation represents a potential environmental crime scene, the likelihood of identifying a responsible party should be considered. For example:

A. A drum found lying on its side on a road shoulder or median could possibly have fallen from a vehicle. Furthermore, without a witness to this act or a name on the container, it is unlikely that a responsible party can be identified. For this situation, a suggested course of action would include documentation of the incident (normally by a law enforcement agency), mitigation, *sampling to determine product characteristics,* cleanup, and disposal.

B. Containers found in a secluded area could possibly represent illegal disposal. For this situation, the likely course of action would include documentation of the incident, mitigation, *collection of samples in a manner consistent with that necessary to prepare evidence for prosecution*, cleanup, and disposal.

OPTIONS FOR INVESTIGATION AND PROSECUTION

Once there is suspicion that an environmental crime has been committed and that there is some likelihood of identifying a responsible party, investigators and prosecutors at the local level should be contacted regarding their assessment of the case. State and federal enforcement agencies may be available to assist local agencies.

State agencies include the Virginia Department of Environmental Quality, Virginia State Police, and the State Attorney General's Office.

Federal agencies include the Environmental Protection Agency (EPA), Federal Bureau of Investigation (FBI), Defense Criminal Investigative Service (DCIS), and the U.S. Coast Guard.

Contact with criminal investigators and prosecutors should be made before any effort is made to collect evidence. Local law enforcement personnel should have the ability to contact their local Commonwealth's Attorney as well as state and federal law enforcement officials. Other state and federal agencies can be contacted through the Virginia Emergency Operations Center at (800) 468-8892.

DETERMINING ENFORCEMENT AUTHORITIES

Once local, state, and federal law enforcement agencies have been contacted, it must then be determined which laws have been violated and which agency has enforcement authority for the incident. In addition to state and federal laws, there may also be local laws regarding these types of incidents.

Materials disposed of illegally are generally considered abandoned, and subsequently, abandoned materials are generally considered to be a *"waste."* Another criterion for being considered a *"waste"* is that the material does not meet original manufacture specifications due to contamination and impurities. These contaminants may then qualify the material as a *"listed hazardous waste."* The criteria for hazardous waste are found under VDEQ's Hazardous Waste Regulations, Part III, beginning at 9 VAC 20-60-100. Refer to Appendix 1 for additional information on this regulation.

There are various state and federal statutes and regulations that may be enforced during these investigations. References to state statutes and regulations are located in Appendix 1. References to federal statutes and regulations are located in Appendix 2.

Additional offenses may lie under applicable local ordinances. Consult your city or county attorney's office for additional details.

Technical support for determining the appropriate enforcement authority may be obtained by contacting local officials, such as the zoning or code official or the hazardous materials coordinator. State agencies, such as the Virginia Department of Environmental Quality, should also be contacted.

Additional technical support for determining the appropriate enforcement authority can be obtained from the Virginia Department of Game and Inland Fisheries, Virginia Marine Resources Commission, or the Virginia Department of Health. All state agencies can be contacted through the Virginia Emergency Operations Center at (800) 468-8892.

Finally, a determination should also be made regarding reporting of releases that are known or suspected of exceeding established notification thresholds.

ASSIGNING RESPONSIBILITY FOR EVIDENCE COLLECTION

If it is decided that no criminal investigation will be conducted, materials should then be sampled only for the purpose of determining proper disposal procedures.

However, if the incident represents a potential environmental crime scene, and if there is interest on the part of investigators and prosecutors to pursue the case, evidence collection will need to be considered in addition to mitigation, cleanup, and disposal activities.

For those situations that present an immediate threat to public safety, it may be appropriate to collect evidence while stabilizing the incident, such as when over-packing a leaking drum. However, evidence collection can also be conducted during the cleanup phase of an incident.

Examples of persons who may collect evidence at the scene include members of law enforcement agencies, fire departments, hazardous material response teams, and employees of cleanup contractors. Regardless of the agency employed, persons engaged in the process of collecting evidence should have a minimum level of training that complies with 29 CFR 1910.120 (e) or (q) (technician or specialist). Cost recovery for evidence collection must be considered in addition to all other costs associated with the incident.

IDENTIFYING SOURCES OF FUNDING AND COST RECOVERY

Cost recovery for the mitigation, sampling, cleanup, and disposal of the material should be considered. If the party responsible for the illegal disposal is known, they should be contacted regarding recovery of costs associated with mitigation, sampling, cleanup, and disposal.

If the responsible party is unknown, the property owner may be responsible for costs associated with mitigation, sampling, cleanup, and disposal. The property owner may be able to pursue cost recovery from the responsible party, once identified.

If the property owner is unknown, unwilling, or unable to assist with funding, notification should be made to the appropriate local authorities, such as the zoning or code official, or the hazardous materials coordinator. Notification can also be made to the appropriate regional office of the Virginia Department of Environmental Quality and the appropriate Hazardous Materials Officer for the Virginia Department of Emergency Management. Contact with VDEQ or a HAZMAT Officer can be made through the Virginia Emergency Operations Center at (800) 468-8892.

If a responsible party is prosecuted, restitution for costs associated with activities such as investigation, cleanup, and disposal should be considered.

SPECIAL NOTE: For incidents when prosecution of a responsible party is being considered, agencies that are involved in the operation and that are interested in cost recovery should submit an itemized invoice of incident-related expenses to the lead law enforcement investigator prior to the trial date.

PREPARING A QUALITY ASSURANCE PROJECT PLAN (QAPP)

A Quality Assurance Project Plan (QAPP) can serve as a guide during evidence collection. The goals of the QAPP are:

- Obtain reliable representative samples from the materials being tested
- Sample handling must not influence the results of the analyses
- Preservation of physical evidence on site (fingerprints, tire tracks, etc.)
- Witnesses' interviews

Components of a QAPP include items such as:

- Site characterization
- Test methods and sampling requirements
- Preparation for sampling
- Sampling procedures
- Chain of custody procedures
- Final scene security

Refer to pages 9 through 21 for additional information on the components of the Quality Assurance Project Plan.

SITE CHARACTERIZATION

Personnel conducting site characterization activities should use personal protective equipment appropriate for conditions present at the scene. Binoculars should be used if necessary to ensure a safe working distance.

An effort should be made to determine conditions at site. Initial site characterization should include the use of detection and monitoring equipment such as:

- Combustible Gas Indicator (CGI)
- Photo Ionization Detector (PID)
- pH paper
- Radiation detector

In addition, an assessment should be made of the containers on the site, including condition, number, types of containers, and markings. It should be emphasized that stressed containers may exhibit some of the following characteristics:

- Swollen sides or ends
- Noise (such as metallic pinging, relief valve hissing)
- Crystallization on the outside of a container

SPECIAL NOTE: High ambient temperatures can increase internal container stress.

SAMPLING REQUIREMENTS

Technical support for determining the appropriate **sampling methods** and **sample containers** can be obtained from the Division of Consolidated Laboratory Services (DCLS). Examples of sampling methods and sample containers are listed below and on the following page.

DCLS should also be contacted to ensure that a representative would be available to receive the samples.

Additional technical support may also be available from the Virginia Department of Environmental Quality (VDEQ) and the Virginia Department of Emergency Management. Contact with DCLS and VDEQ can be made through the Virginia Emergency Operations Center at (800) 468-8892.

Sampling Methods

Random Samples

Determine if there is a suspected similarity in the contents of each container. If so, establish a plan to allow for "random selection" of 20 percent of the containers present. Determination of similarity in container contents may require initial efforts to categorize the containers. Random sampling selections are then performed for each category. If there is no suspected similarity with the containers, each container will most likely need to be sampled.

Quality Control Replicates

A replicate sample should be taken from 20 percent of all samples taken for quality control purposes.

Field Blanks

Field blanks are representative samples of each item used in sampling the material. These items are set up as if to be used for sampling, but are submitted to the laboratory for analysis without ever being used. They should be selected from the sampling tools in a random manner. These tools may include sample containers, Coliwasa tubes, pipettes, zip lock bags, scoops, and gloves.

Split Samples

Split samples are duplicate samples used for independent laboratory analysis.

SAMPLING REQUIREMENTS

Sample Containers

Determine specific requirements for each sample such as:

- Type and size of sample container(s) (see note 1 below)
- Volume of sample(s) (see note 2 below)
- Confirmation of random selection techniques for containers (if used)
- Additional samples required (field blank, duplicate samples, etc.)
- Preservatives (such as ice), storage containers

Note 1: Examples of sample containers include:

- Wide mouth jar with Teflon-lined lid (4 oz. or 8 oz.)
- Volatile Organic Analysis (VOA) vial (40 or 60 ml)
- HDPE plastic bottle (250 or 500 ml)
- Amber bottle with Teflon-lined lid (1 liter)

Note 2: The type of analysis desired (such as ignitability) and the results of site characterization efforts may determine the type of sample container used.

Typical Sampling Kit

2 – quart amber bottle with Teflon-lined lid
4 – 8 ounce wide mouth jar with Teflon-lined lid
2 – 60 ml VOA vial with Teflon-faced septa
4 – 40 ml VOA vial with Teflon-faced septa
2 – 500 ml HDPE bottle
3 – 250 ml HDPE bottle
8 – 4 ounce Whirl Pak
8 – 8 ounce Whirl Pak
8 – 9 x 12 zip lock bag
12 – quart zip lock bag
1 – paint can
12 – pipet, plastic, disposable
3 – scoops, plastic, assorted
1 ea – grease pencil (red and black)
1 – paint pen
1 – Sharpie marker (black)

2 – ballpoint pen
2 – legal pad
6 – DCLS Chain of Custody form
6 – DCLS Hazard Waste Determination Menu form
1 – roll evidence tape
1 – disposable / waterproof camera
4 pr – latex glove
4 pr – nitrile glove
3 – large trash bag

PREPARATION FOR SAMPLING

Preparation for sampling includes preparing the site, sample containers, sampling tools and equipment, methods for sample container decontamination, and sample log station.

Preparation of the Site

Conduct a size up of general area, define work zones, (preferably with barrier tape) and ensure scene security. Also, establish a site Work and Safety Plan that includes items such as:

- PPE for hot and warm zone (including inner and outer gloves)
- PPE for personnel assigned responsibilities to log samples in the cold zone
- Decontamination procedures for personnel (set up in the warm zone)
- Fire and EMS support activities (such as back up lines)

All personnel at the site should be briefed on the Work and Safety plan.

The site should be documented through photographs, sketches, diagrams, etc. (per law enforcement guidelines). This documentation should include characteristics such as approximate dimension and location of containers. Also, personnel should prepare to take field notes to document activities and general observations such as weather, date, and time.

SPECIAL NOTE: Evidence should be handled at the direction of the law enforcement official(s) on site.

SPECIAL NOTE: The scene should be photographed as soon as practical.

Preparation of Sample Containers

Prepare sample containers for evidence collection. Persons collecting evidence may be required to testify that the sample containers were clean

and unused prior to collecting samples. Also, prepare a means to transport the sample containers to the sampling site (such as a plastic tub lined with an absorbent pad).

When using VOA sample containers, it may be helpful to provide a means to hold the container upright for filling.

PREPARATION FOR SAMPLING

Preparation of Tools and Equipment – Hot Zone

Tools and equipment used in the hot zone include items such as:

- Sample containers
- Air monitoring devices
- Sampling devices, such as pipettes, Coliwasa (Composite Liquid Waste Sampler) tubes, drum thieves, shovels, tongue depressors, etc.
- Plastic bags for secondary containment
- Tools, such as bung wrench (use of spark-proof tools is preferable)
- Marker pen (such as Sharpie pen, paint stick, etc.)
- Evidence tape
- Receptacle for waste materials
- Lighting
- Camera (consider use of a disposable/waterproof camera which can be decontaminated if necessary)
- Spare outer gloves

Preparation of Sample Container Decontamination Equipment – Hot Zone

Equipment used for decontaminating sample containers in the hot zone includes items such as:

- Dry decontamination wipes, such as paper towels, and a trash receptacle, such as a plastic can liner.

- Decontamination solution, such as soap and rinse water or a neutralizing agent.

Preparation of Sample Log Station – Cold Zone

Equipment used for logging sample containers in the cold zone includes items such as:

- Zip-lock bags
- Container labels
- Marker pen, ink pen, writing tablet
- Evidence tape
- Suitable working surface (such as a clean recovery drum)

SAMPLING PROCEDURES

Law enforcement personnel should have an opportunity to witness all sample collection.

General Hot Zone Activities

Persons entering the hot zone for evidence collection should consider the following:

- Providing continuous air monitoring with detection and monitoring equipment.

- Preserving any physical evidence on site.

- Condition of containers. Stressed containers may exhibit some of the following characteristics:

  - Swollen sides or ends
  - Noise (such as metallic pinging, relief valve hissing)
  - Crystallization on the outside of a containers

  SPECIAL NOTE: High ambient temperatures can increase internal container stress.

- Minimize exposure to unknown materials.

- If possible, do not walk through any spilled material.

- Upright container(s) (if necessary).

- Ensure lids/bungs are tight before moving.

- An identification number should be assigned to each source container.

- A field analysis using various devices, such as a CGI, PID, classifier strips, colormetric tubes, or pH paper, may be conducted on both the source container(s) and sample container(s) as deemed necessary. All results should be recorded.

- Outer gloves should be changed between each sample.

- Sampling equipment should not be reused between different sample sources.

SAMPLING PROCEDURES

Sampling Non-Pressure Containers

Non-pressure containers should be examined for the presence of crystals that could indicate an unstable condition**. DO NOT handle containers if crystals are present.**

Opening Non-Pressure Containers

Suggested procedures for opening drums with bung closures are as follows:

- First, SLOWLY *loosen* the small bung.
  - Do not remove
  - Hold breath while wearing SCBA (to minimize noise interference)
  - Listen for pressure release

- Second, SLOWLY *remove* the large bung.
  - Hold breath while wearing SCBA
  - Listen for pressure release

Suggested procedures for opening non-pressure containers (other than drums), such as cans with removable lids, are as follows:

- SLOWLY loosen the lid (pry, unscrew, etc.)
  - Hold breath while wearing SCBA
  - Listen for pressure release

Obtaining Liquid Samples from Non-Pressure Containers

Obtain a sample that is representative of the entire contents. Suggested procedures are as follows:

- For large containers with liquid contents, use a drum thieve or Coliwasa tube inserted completely through the contents. ***Coliwasa tubes should be in the OPEN position when inserted into a container for sampling in order to obtain a full representative sample.***

- In order to fully extend the Coliwasa tube or drum thief out of a large container, it may be helpful to allow the individual taking the sample to stand on a stable object, such as a small stepladder.

SAMPLING PROCEDURES

Obtaining Liquid Samples from Non-Pressure Containers (continued)

- When handling a sampling tube, avoid touching any portion that has been in contact with the contents of the source container.

- When transferring the contents of a sampling tube to a sample container, small upright containers (such as a VOA vial) should be supported. However, if at all possible, avoid holding these types of containers directly by hand in order to minimize any exposure to spilled materials.

- When filling sample containers, avoid resting the containers on surfaces with obvious contamination.

- For small containers with liquid contents, first stir the contents with a pipette and then pour the contents into a sample container.

- In order to estimate the volume of liquid in a source container, a yardstick can be placed alongside a sampling tube as it is removed from the source container but before the contents are released into the sample container. The level of the liquid (e.g., inches) can then be recorded on the outside of the source container. Refer to page 18 for additional information on estimating liquid volumes for cylindrical containers.

Obtaining Samples of Oily Substances on Water

Samples of oily substances on water can be obtained by skimming the surface of the water with an open sample jar to obtain the sample. The jar should be approximately ¾ full.

Obtaining Samples of Solid Objects

Samples of solid objects can be placed in a sterile bag such as a "Whirl-Pak." This bag can then be placed into a larger bag, such as a zip-lock bag and, if desired, both bags can be placed into a container, such as an evidence can.

Obtaining Soil Samples

Soil samples should be replicated with at least one and up to three separate samples of each area of interest. Samples should be collected in a grid pattern. Avoid obtaining biased samples. Biased samples are those taken only from areas of obvious contamination. To prove an entire site is hazardous, representative samples may need to be taken throughout the site.

SAMPLING PROCEDURES

Monitoring of Samples

If possible, the contents of sample containers should be monitored with appropriate detection and monitoring equipment and the results recorded. This information can assist with determining appropriate laboratory analysis of the sample.

Decontaminating Sample Containers

An attempt should be made to decontaminate all sample containers prior to their removal from the hot zone.

- Remove any spilled material with a dry wipe, such as a paper towel. Soiled wipes should be placed in an appropriate receptacle.

- If the sample container is decontaminated using a liquid solution, avoid submerging the sample container into the solution.

- If decontamination is insufficient, the sample container can be placed into a secondary containment, such as a zip-lock bag.

Marking Sample Containers

Following the collection of samples, the individual taking the sample should write the following information on the outside of the sample container:

- Initials of sampler
- Date and time
- Sample source (such as drum number 1)

Transport of Sample Containers from the Hot Zone

Depending upon the situation, sample containers may be carried by personnel operating in the hot zone directly to the cold zone.

As an alternative, an individual operating in the warm zone (typically someone assigned responsibilities for decontamination) can carry sample containers from the hot zone to the cold zone.

SAMPLING PROCEDURES

Estimating the Total Volume in a Cylindrical Container

The total volume of a cylindrical container, such as a 55-gallon drum, can be estimated as follows:

1. Determine the area of one end of the container by measuring the radius of
   the container **(one-half of the diameter)** in inches, squaring that dimension **(multiply the radius by itself)** and then multiplying that value by 3.14 **(a constant value for all of these calculations)**.

2. Next, determine the height of the material inside the container by placing a
   ruler (such as a yardstick) next to a loaded sample tube (such as a Coliwasa tube) that was used to obtain a full representative sample of the container.

3. Now multiply the area of one end of the container **(from Step 1)** by the

height of the material in the container **(from Step 2)** to obtain the volume of the materials in cubic inches.

4. Divide the volume of the material in cubic inches (**from Step 3)** by 231 **(the number of cubic inches in a gallon)** to determine the volume in gallons.

Example:

A 55-gallon drum has a diameter of 23 inches and therefore a radius of **11.5 inches**.

Square the radius of **11.5 inches** (multiply the radius by itself) for a value of **132.25** and then multiply that figure by **3.14** for an area of **415** square inches.

The height of liquid in the drum is measured to be **20 inches**.

The area of **415** square inches is then is multiplied by **20 inches** for a total volume of **8,300** cubic inches.

Divide the volume of **8,300** cubic inches by **231** (number of cubic inches in a gallon), which then yields a volume of **35.9** gallons.

Use of the Biological Agent Sample Collection Kit

- Open one Whirl-Pak bag.
- Moisten swab in green-top tube with sterile saline (black-top tube).
- Collect sample by rubbing moistened swab over potentially contaminated area.
- Place swab back into tube, tighten cap and place in Whirl- Pak bag.
- Repeat collection with a second green-top tube and place in the same Whirl-Pak bag.
- Seal the Whirl-Pak. Using a permanent marker, label the Whirl-Pak bag.
- Spray the exterior of the Whirl-Pak bag with the bleach solution from the sprayer unit included with the DCLS sampling kit.
- Place the Whirl-Pak bag into the Zip-Lock bag provided with the Biological Agent Sampling Kit.
- Spray the exterior of the Zip-Lock bag with the bleach solution.
- Place the Zip-Lock bag into a sturdy container, such as a one-gallon paint can.

CHAIN OF CUSTODY PROCEDURES

Chain of custody procedures include documentation of the samples, final packaging of samples, and transport of samples.

Documentation of Sample Containers

Each sample container should be logged in the cold zone at the scene. The log should include information such as:

- SAMPLE NUMBER
- SOURCE OF SAMPLE
- DATE AND TIME SAMPLE WAS OBTAINED
- INITIAL OF PERSON TAKING SAMPLE
- DESCRIPTION OF SAMPLE & CONTAINER TYPE
- ESTIMATE OF SAMPLE VOLUME

Attach a sample label and if available, evidence tape to each sample container.

Final Packaging of Sample Containers

Final packaging of sample containers should be conducted in a manner to ensure the safety of all persons who may handle the samples once they are offsite.

- If deemed necessary, samples can be placed into a secondary container, such as a zip-lock bag or metal can.

- If a sample is transported to the laboratory in the original container in which it was found, it should be packaged with multiple containment as outlined above.

- Place each sample in a suitable transport container, such as an insulated cooler. Consult with DCLS to determine the appropriate temperature for transport of the samples.

- If ice is used to chill samples, the cooler should first be lined with a plastic bag prior to placing the ice inside.

  Note: To avoid ice from having direct contact with the outside of sample containers (and thus possibly damaging markings and labels on

the outside of these containers), the cooler can be lined with a second plastic bag once the ice has been placed inside.

- When using the insulated cooler provided by DCLS, remove all unused sampling equipment prior to loading evidence samples. Also, no waste materials, such as dirty gloves, should be sent to the lab.
-

CHAIN OF CUSTODY PROCEDURES

Transporting Sample Containers

Transport the samples to the lab along with a completed Laboratory Analysis Request form. A copy of this form is located in Appendix 3.

If possible, law enforcement personnel should maintain custody of the samples at the scene and during transport.

Suggested procedures for the transport of samples include:

- Store samples free from exposure to conditions that could alter them.
- Do not store known or suspected incompatible materials together.
- Store samples with low and high levels of contamination separately.
- If possible, do not transport samples in the passenger compartment of a vehicle. An open cargo vehicle, such as a pick-up truck, can offer increased safety for the passenger(s). If deemed necessary, use "explosion-proof" transport containers and/or vehicles.

According to VDEQ Regulations Governing the Transportation of Hazardous Materials (Chapter 110), Section 9 VAC 20-110-50, states that the regulations apply to, "any person who transports hazardous materials, or hazardous radioactive materials, or offers such materials for shipment." However, Section 9 VAC 20-110-60 of the same chapter reads as follows:

> Nothing contained in these regulations shall apply to regular military or naval forces of the United States, nor to the duly authorized militia of any state or territory thereof, or to the police or fire departments of this Commonwealth, providing the same are acting within their official capacity and in the performance of their duties.

Submitting Sample Containers

Upon arrival at the laboratory, the appropriate chain of custody form should be completed. Examples of forms used by various state agencies are included in Appendix 4.

A copy of a DCLS Hazardous Waste Determination Menu (included in Appendix 3) can be submitted with the chain of custody form to assist in the selection of hazardous waste parameters for analysis.

FINAL SCENE SECURITY

Following the collection of samples, steps should be taken to ensure public safety at the site. These steps should include:

- Securing all containers, structures, etc., at the site.

- Determining the extent of cleanup required for the scene. If necessary, this responsibility may be assigned to a clean-up contractor. Funding for this operation needs to be determined. Refer to the section on Identifying Sources of Funding and Cost Recovery for additional information on funding.

- If necessary, steps should be taken to secure the scene through the use of barrier tape, law enforcement personnel, or other methods deemed appropriate.

REPLENISHING THE DCLS SAMPLE KIT

Most sampling equipment used during an incident can be replaced by DCLS.

All unused items in the kit should be returned to DCLS when submitting the insulated sample cooler with evidence samples. Remember to remove unused items from the cooler prior to loading the samples – this can be accomplished by simply removing the plastic bag liner in the cooler with all of the unused equipment intact.

Upon arrival at the lab, the cooler being submitted can be reloaded at that time or there may be another cooler already prepared that can be exchanged.

APPENDIX 1

STATE STATUTES AND REGULATIONS

The charts in Appendix 1 of this guide summarize many of the state environmental statutes typically encountered by law enforcement personnel who investigate and prosecute environmental crimes. The charts are intended as a reference guide only.

Every effort has been made to reflect current amendments to the statutes as of the most recent publication of this guide, but the current edition of the Code should also be consulted. The charts do not attempt to catalog all the applicable statutes or to describe all the regulatory requirements imposed.

It is strongly recommended that you consult the actual statutes if you have a case that you believe may involve environmental criminal conduct. The charts break the statutes into the following categories:

I. AIR POLLUTION CONTROL LAW AND RELATED STATUTES

Definitions (§10.1-1300). As used in this chapter, unless the context requires a different meaning:

"Advisory Board" means the State Advisory Board on Air Pollution.

"Air pollution" means the presence in the outdoor atmosphere of one or more substances which are or may be harmful or injurious to human health, welfare or safety, to animal or plant life, or to property, or which unreasonably interfere with the enjoyment by the people of life or property.

"Board" means the State Air Pollution Control Board.

"Department" means the Department of Air Pollution Control.

"Director" or "Executive Director" means the Executive Director of the Department of Air Pollution Control.

"Owner" shall have no connotation other than that customarily assigned to the term "person," but shall include bodies politic and corporate, associations, partnerships, personal representatives, trustees and committees, as well as individuals.

"Person" means an individual, corporation, partnership, association, a governmental body, a municipal corporation, or any other legal entity.

"Special order" means a special order issued under § 10.1-1309.

PROHIBITED ACT	MAXIMUM FINE & IMPRISONMENT	LEVEL
§ 10.1-1309.1 **Knowingly and willfully** abandon a permitted facility without proper closure or financial assurance which results in significant harm or imminent and substantial threat of significant harm to human health or the environment.	♦ $100,000 ♦ 10 years (2 yr. minimum)	Class 4 Felony
§ 10.1-1320 **Knowingly** violate any of the provisions of the following: ♦ The Air Pollution Control Law (Title 10.1, Chapter 13); ♦ Any code, rule, or regulation promulgated thereto, ♦ Any permit condition, or ♦ Any final determination or order of the DEQ.	$10,000/day	Misdemeanor
§ 46.2-1179.1 Violate clean alternative fuel fleet standards per § 46.2-1187	$500/vehicle/day	Class 3 Misdemeanor
§ 46.2-1187 Violate the provisions on emissions inspections	($1,000 maximum and $100 minimum for subsequent offenses)	Class 3 Misdemeanor

II. WASTE MANAGEMENT STATUTES

Definitions (§ 10.1-1400). As used in this chapter unless the context requires a different meaning:

"Applicant" means any and all persons seeking or holding a permit required under this chapter.

"Board" means the Virginia Waste Management Board.

"Composting" means the manipulation of the natural aerobic process of decomposition of organic materials to increase the rate of decomposition.

"Department" means the Department of Waste Management.

"Director" means the Director of the Department of Waste Management.

"Disclosure statement" means a sworn statement or affirmation, in such form as may be required by the Director, which includes:

1. The full name, business address, and social security number of all key personnel;

2. The full name and business address of any entity, other than a natural person, that collects, transports, treats, stores, or disposes of solid waste or hazardous waste in which any key personnel holds an equity interest of five percent or more;

3. A description of the business experience of all key personnel listed in the disclosure statement;

4. A listing of all permits or licenses required for the collection, transportation, treatment, storage or disposal of solid waste or hazardous waste issued to or held by any key personnel within the past ten years;

5. A listing and explanation of any notices of violation, prosecutions, administrative orders (whether by consent or otherwise), license or permit suspensions or revocations, or enforcement actions of any sort by any state, federal or local authority, within the past ten years, which are pending or have concluded with a finding of violation or entry of a consent agreement, regarding an allegation of civil or criminal violation of any law, regulation or requirement relating to the collection, transportation, treatment, storage or disposal of solid waste or hazardous waste by any key personnel, and an itemized list of all convictions within ten years of key personnel of any of the following

II. WASTE MANAGEMENT STATUTES (definitions, continued)

crimes punishable as felonies under the laws of the Commonwealth or the equivalent thereof under the laws of any other jurisdiction: murder; kidnapping; gambling; robbery; bribery; extortion; criminal usury; arson; burglary; theft and related crimes; forgery and fraudulent practices; fraud in the offering, sale, or purchase of securities; alteration of motor vehicle identification numbers; unlawful manufacture, purchase, use or transfer of firearms; unlawful possession or use of destructive devices or explosives; violation of the Drug Control Act, Chapter 34 (§ 54.1-3400 et seq.) of Title 54.1; racketeering; or violation of antitrust laws;

6. A listing of all agencies outside the Commonwealth which have regulatory responsibility over the applicant or have issued any environmental permit or license to the applicant within the past ten years, in connection with the applicant's collection, transportation, treatment, storage, or disposal of solid waste or hazardous waste;

7. Any other information about the applicant and the key personnel that the Director may require that reasonably relates to the qualifications and ability of the key personnel or the applicant to lawfully and competently operate a solid waste management facility in Virginia; and

8. The full name and business address of any member of the local governing body or planning commission in which the solid waste management facility is located or proposed to be located, who holds an equity interest in the facility.

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that such solid waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

"Equity" includes both legal and equitable interests.

"Federal acts" means any act of Congress providing for waste management and regulations promulgated thereunder.

"Hazardous material" means a substance or material in a form or quantity which may pose an unreasonable risk to health, safety, or property when transported, and which the Secretary of Transportation of the United States has so designated by regulation or order.

II. WASTE MANAGEMENT STATUTES (definitions, continued)

"Hazardous substance" means a substance listed under United States Public Law 96-510, the Comprehensive Environmental Response Compensation and Liability Act.

"Hazardous waste" means a solid waste or combination of solid waste which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may:

1. Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating illness; or

2. Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

"Hazardous waste generation" means the act or process of producing hazardous waste.

"Household hazardous waste" means any waste material derived from households (including single and multiple residences, hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas) which, except for the fact that it is derived from a household, would be classified as a hazardous waste, including but not limited to, nickel, cadmium, mercuric oxide, manganese, zinc-carbon or lead batteries; solvent-based paint, paint thinner, paint strippers, or other paint solvents; toxic art supplies, used motor oil and unusable gasoline or kerosene, fluorescent or high intensity light bulbs, ammunition, fireworks, banned pesticides, or restricted-use pesticides as defined in § 3.1-249.27. All empty household product containers and any household products in legal distribution, storage or use shall not be considered household hazardous waste.

"Key personnel" means the applicant itself and any person employed by the applicant in a managerial capacity, or empowered to make discretionary decisions, with respect to the solid waste or hazardous waste operations of the applicant in Virginia, but shall not include employees exclusively engaged in the physical or mechanical collection, transportation, treatment, storage, or disposal of solid or hazardous waste and such other employees as the Director may designate by regulation. If the applicant has not previously conducted solid waste or hazardous waste operations in Virginia, the term also includes any officer, director, partner of the applicant, or any holder of five percent or more of the equity or debt of the applicant. If any holder of five percent or more of the equity or debt of the applicant or of any key personnel is not a natural person, the term includes all key personnel of that entity, provided that where such entity is a chartered lending institution or a reporting company under the Federal Securities Exchange Act of 1934, the term does not include key personnel of such entity. Provided further that the term means the chief

II. WASTE MANAGEMENT STATUTES (definitions, continued)
III.

executive officer of any agency of the United States or of any agency or political subdivision of the Commonwealth, and all key personnel of any person, other than a natural person, that operates a landfill or other facility for the disposal, treatment or storage of nonhazardous solid waste under contract with or for one of those governmental entities.

"Manifest" means the form used for identifying the quantity, composition, origin, routing and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment or storage of such hazardous waste.

"Mixed radioactive waste" means radioactive waste that contains a substance which renders the mixture a hazardous waste.

"Open dump" means a site on which any solid waste is placed, discharged, deposited, injected, dumped or spilled so as to create a nuisance or present a threat of a release of harmful substances into the environment or present a hazard to human health.

"Person" includes an individual, corporation, partnership, association, a governmental body, a municipal corporation or any other legal entity.

"Radioactive waste" or "nuclear waste" includes:

1. "Low-level radioactive waste" material that:

    a. Is not high-level radioactive waste, spent nuclear fuel, transuranic waste, or by-product material as defined in Section 11e (2) of the Atomic Energy Act of 1954 [42 U.S.C. § 2014 (e) (2)]; and

    b. The Nuclear Regulatory Commission, consistent with existing law, classifies as low-level radioactive waste; or

2. "High-level radioactive waste" which means:

    a. The highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and

II. WASTE MANAGEMENT STATUTES (definitions, continued)

b. Other highly radioactive material that the Nuclear Regulatory Commission, consistent with existing law, determines by rule requires permanent isolation.

"Recycling residue" means the (i) nonmetallic substances, including but not limited to plastic, rubber, and insulation, which remain after a shredder has separated for purposes of recycling the ferrous and nonferrous metal from a motor vehicle, appliance, or other discarded metallic item and (ii) organic waste remaining after removal of metals, glass, plastics and paper which are to be recycled as part of a resource recovery process for municipal solid waste resulting in the production of a refuse-derived fuel.

"Resource conservation" means reduction of the amounts of solid waste that are generated, reduction of overall resource consumption and utilization of recovered resources.

"Resource recovery" means the recovery of material or energy from solid waste.

"Resource recovery system" means a solid waste management system which provides for collection, separation, recycling and recovery of solid wastes, including disposal of nonrecoverable waste residues.

"Sanitary landfill" means a disposal facility for solid waste so located, designed and operated that it does not pose a substantial present or potential hazard to human health or the environment, including pollution of air, land, surface water or ground water.

"Sludge" means any solid, semisolid or liquid wastes with similar characteristics and effects generated from a public, municipal, commercial or industrial wastewater treatment plant, water supply treatment plant, air pollution control facility or any other waste producing facility.

"Solid waste" means any garbage, refuse, sludge and other discarded material, including solid, liquid, semisolid or contained gaseous material, resulting from industrial, commercial, mining and agricultural operations, or community activities but does not include (i) solid or dissolved material in domestic sewage, (ii) solid or dissolved material in irrigation return flows or in industrial discharges which are sources subject to a permit from the State Water Control Board, or (iii) source, special nuclear, or by-product material as defined by the Federal Atomic Energy Act of 1954, as amended.

II. WASTE MANAGEMENT STATUTES (definitions, continued)

"Solid waste management facility" means a site used for planned treating, long term storage, or disposing of solid waste. A facility may consist of several treatment, storage, or disposal units.

"Transport" or "transportation" means any movement of property and any packing, loading, unloading or storage incidental thereto.

"Treatment" means any method, technique or process, including incineration or neutralization, designed to change the physical, chemical or biological character or composition of any waste to neutralize it or to render it less hazardous or nonhazardous, safer for transport, amenable to recovery or storage or reduced in volume.

"Vegetative waste" means decomposable materials generated by yard and lawn care or land-clearing activities and includes, but is not limited to, leaves, grass trimmings, and woody wastes such as shrub and tree prunings, bark, limbs, roots, and stumps.

"Waste" means any solid, hazardous or radioactive waste as defined in this section.

"Waste management" means the collection, source separation, storage, transportation, transfer, processing, treatment and disposal of waste or resource recovery.

“Yard waste" means decomposable waste materials generated by yard and lawn care and includes leaves, grass trimmings, brush, wood chips, and shrub and tree trimmings. Yard waste shall not include roots or stumps that exceed six inches in diameter.

II. WASTE MANAGEMENT STATUTES (continued)

PROHIBITED ACT	MAXIMUM FINE & IMPRISONMENT	LEVEL
§ 10.1-1408 Permit required; open dumps prohibited.	(see 10.1-1455)	(see 10.1-1455)
§ 10.1-1426 Permits required; waiver of requirements; reports; conditional permits.	(see 10.1-1455)	(see 10.1-1455)
§ 10.1-1429 Notice of release of hazardous substance.	(see 10.1-1455)	(see 10.1-1455)
§ 10.1-1410 **Knowingly and willfully** abandon solid waste management facility without proper closure or financial assurance, which results in significant harm or imminent and substantial threat of significant harm to human health or the environment.	♦ $100,000 ♦ 10 years (2 yr. minimum)	Class 4 Felony
§ 10.1-1455(B) **Knowingly** transport hazardous waste to an unpermitted facility; or transport, treat, store, or dispose without a permit or in violation of a permit; or Make any false statement or representation in any document filed, maintained, or used.	♦ $25,000/day ♦ 5 years (1 yr. minimum)	Felony
§ 10.1-1455(D) **Willfully** violate, or refuse, or fail or neglect to comply with any regulation, order, any condition of permit or certification, or any provisions of the Chapter.	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
§ 10.1-1455(I) **Knowingly** transport, treat, store, dispose, or export hazardous waste in violation of chapter or regulations, and **Knowing** at the time that the conduct places another in **imminent danger of death or serious bodily injury**	♦ $250,000 ♦ 15 years (2 yr. minimum)	Felony
Corporate Defendant	Greater of $1,000,000 or 3 times the economic benefit	
Subsequent Convictions	Double Penalties	
Litter Control and Recycling (Title 10.1, Chapter 14, Article 3)		
§ 10.1-1415.1 Violate plastic container labeling requirements	$50/day	
§ 10.1-1418 Violation of the article with no penalty specifically provided	$50/violation	
§ 10.1-1418.2 **Knowingly** store, dump, or otherwise place more than 100 waste tires on public or private property without a permit	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
§ 10.1-1418.2 **Knowingly** store, dump, or otherwise place more than 500 waste tires on public or private property without a permit	5 years (1 yr. minimum) [or at the discretion of the court or jury, as a Class 1 Misdemeanor]	Class 6 Felony

II. WASTE MANAGEMENT STATUTES (continued)

PROHIBITED ACT	MAXIMUM FINE & IMPRISONMENT	LEVEL
§ 10.1-1419 Fail to place and maintain litter receptacles when required	$25/day	
§ 10.1-1422.5 Failure by retail seller of oil to post a sign that they do not accept return of used oil	$250	Class 4 Misdemeanor
§ 10.1-1424 Allowing escape of load material from a vehicle	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
§ 10.1-1424.1 Sale of packaging materials that contain fully halogenated chlorofluorocarbons as a blowing or expansion agent	$500	Class 3 Misdemeanor
Lead Acid Batteries (Title 10.1, Chapter 14, Article 3.1)		
§ 10.1-1425.1 Violate lead acid battery disposal requirements	$50/battery	
§ 10.1-1425.3 Failure by a battery retailer to post notice after a warning	$50	
§ 10.1-1425.4 Failure by battery wholesaler to accept used lead batteries	$50/battery	
§ 10.1-1454.1 Transport regulated waste by water vessels or containers not designed, constructed, operated and maintained so as to prevent escape of liquids, waste, and odors	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
§ 10.1-1454.3 Transport regulated waste by truck in containers not designed, constructed, operated, and maintained according to regulations, including preventing escape of waste and liquids.	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
§ 18.2-121 Entering property of another for purpose of damaging it, etc.	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
§ 18.2-162 **Intentionally** destroy or damage or attempt to destroy or damage any facility or equipment so as to threaten a release of radioactive materials or ionizing radiation beyond the areas where they are normally used or contained.		Class 4 Felony
If injury results		Class 3 Felony
If death results		Class 2 Felony
§ 18.2-324 Throw, deposit, or cause to be deposited on a highway any substance likely to injure a person or animal, or to damage a vehicle, or to create a hazard to the traveling public	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor

III. STATE WATER CONTROL LAW AND RELATED STATUTES

Definitions (62.1-44.3.). Unless a different meaning is required by the context, the following terms as used in this chapter shall have the meanings hereinafter respectively ascribed to them:

"Board" means the State Water Control Board.

"Member" means a member of the Board.

"Certificate" means any certificate issued by the Board.

"State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

"Owner" means the Commonwealth or any of its political subdivisions, including, but not limited to, sanitation district commissions and authorities, and any public or private institution, corporation, association, firm or company organized or existing under the laws of this or any other state or country, or any officer or agency of the United States, or any person or group of persons acting individually or as a group that owns, operates, charters, rents, or otherwise exercises control over or is responsible for any actual or potential discharge of sewage, industrial wastes, or other wastes to state waters, or any facility or operation that has the capability to alter the physical, chemical, or biological properties of state waters in contravention of § 62.1-44.5.

"Pollution" means such alteration of the physical, chemical or biological properties of any state waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses, provided that (i) an alteration of the physical, chemical, or biological property of state waters, or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution, but which, in combination with such alteration of or discharge or deposit to state waters by other owners, is sufficient to cause pollution; (ii) the discharge of untreated sewage by any owner into state waters; and (iii) contributing to the contravention of standards of water quality duly established by the Board, are "pollution" for the terms and purposes of this chapter.

III. STATE WATER CONTROL LAW AND RELATED STATUTES (definitions, continued)

"Sewage" means the water-carried human wastes from residences, buildings, industrial establishments or other places together with such industrial wastes and underground, surface, storm, or other water as may be present.

"Industrial wastes" means liquid or other wastes resulting from any process of industry, manufacture, trade or business, or from the development of any natural resources.

"Other wastes" means decayed wood, sawdust, shavings, bark, lime, garbage, refuse, ashes, offal, tar, oil, chemicals, and all other substances, except industrial wastes and sewage, which may cause pollution in any state waters.

"Establishment" means any industrial establishment, mill, factory, tannery, paper or pulp mill, mine, coal mine, colliery, breaker or coal-processing operations, quarry, oil refinery, boat, vessel, and every other industry or plant or works the operation of which produces industrial wastes or other wastes or which may otherwise alter the physical, chemical or biological properties of any state waters.

"Sewerage system" means pipelines or conduits, pumping stations, and force mains, and all other construction, devices, and appliances appurtenant thereto, used for conducting sewage or industrial wastes or other wastes to a point of ultimate disposal.

"Reuse" means the use of reclaimed water for a direct beneficial use or a controlled use that is in accordance with the requirements of the Board.

"Reclaimed water" means water resulting from the treatment of domestic, municipal or industrial wastewater that is suitable for a direct beneficial or controlled use that would not otherwise occur. Specifically excluded from this definition is "gray water."

"Reclamation" means the treatment of domestic, municipal or industrial wastewater or sewage to produce reclaimed water for a direct beneficial or controlled use that would not otherwise occur.

"The law" or "this law" means the law contained in this chapter as now existing or hereafter amended.

"Rule" means a rule adopted by the Board to regulate the procedure of the Board pursuant to § 62.1-44.15 (7).

III. STATE WATER CONTROL LAW AND RELATED STATUTES (definitions, continued)

"Special order" means a special order issued under subdivisions (8a), (8b), and (8c) of § 62.1-44.15.

"Ruling" means a ruling issued under § 62.1-44.15 (9).

"Regulation" means a regulation issued under § 62.1-44.15 (10).

"Standards" means standards established under subdivisions (3a) and (3b) of § 62.1-44.15.

"Policies" means policies established under subdivisions (3a) and (3b) of § 62.1-44.15.

"Person" means an individual, corporation, partnership, association, governmental body, municipal corporation or any other legal entity.

"Pretreatment requirements" means any requirements arising under the Board's pretreatment regulations including the duty to allow or carry out inspections, entry or monitoring activities; any rules, regulations, or orders issued by the owner of a publicly owned treatment works; or any reporting requirements imposed by the owner of a publicly owned treatment works or by the regulations of the Board.

"Pretreatment standards" means any standards of performance or other requirements imposed by regulation of the Board upon an industrial user of a publicly owned treatment works.

"Excavate" or "excavation" means ditching, dredging, or mechanized removal of earth, soil or rock.

"Normal agricultural activities" means those activities defined as an agricultural operation in § 3.1-22.29, and any activity that is conducted as part of or in furtherance of such agricultural operation, but shall not include any activity for which a permit would have been required as of January 1, 1997, under 33 U.S.C.
§ 1344 or any regulations promulgated pursuant thereto.

"Normal silvicultural activities" means any silvicultural activity, as defined in § 10.1-1181.1, and any activity that is conducted as part of or in furtherance of such silvicultural activity, but shall not include any activity for which a permit would have been required as of January 1, 1997, under 33 U.S.C.
§ 1344 or any regulations promulgated pursuant thereto.

III. STATE WATER CONTROL LAW AND RELATED STATUTES (definitions, continued)

"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

PROHIBITED ACT	MAXIMUM FINE & IMPRISONMENT	LEVEL
§ 32.1-27 Violating or refusing failing or neglecting to comply with any regulation or order of the State Health Board or Commissioner, or any provision of Title 32.1, "Health," including Sewage Disposal (Article 1); Public Water Supplies (Article 2), Private Well Construction (Article 2.1), or Toxic Substances Information (Article 9)	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
§ 62.1-44.5 Prohibition of waste discharges or other quality alterations of state waters except as authorized by permit; notification required.	(see 62.1-44.32)	(see 62.1-44.32)
§ 62.1-44.15:1.1 Knowingly and willfully fail to implement a closure plan for a permitted facility or fail to provide adequate funds for implementation of such a plan, if the failure results in significant harm or imminent and substantial threat of significant harm to human health or the environment.	♦ $100,000 ♦ 10 years (2 yr. minimum)	Class 4 Felony
§ 62.1-44.18:3 Knowingly and willfully fail to implement a closure plan for a permitted sewerage facility or fail to provide adequate plan implementation funds, if the failure results in significant harm or imminent and substantial threat of significant harm to human health or the environment.	♦ $100,000 ♦ 10 years (2 yr. minimum)	Class 4 Felony
§ 62.1-44.32(b) **Knowingly** violate the Virginia State Water Control Law (Title 62.1, Chapter 3.1), or any regulation under the Law, or any condition of any certificate or order, or **Knowingly** make any false statement in any form required to be submitted under the Chapter; or **Knowingly** render inaccurate any monitoring device or method required to be maintained under the Chapter.	♦ $50,000/day ($5,000/day minimum) ($10,000 minimum for corporate defendants) ♦ 3 years (1 yr. minimum) [or at the discretion of the court or jury, not more than 12 months]	Felony
§ 62.1-44.32(c) **Knowingly** violate the State Water Control Law, and **Knowing** at the time that the conduct places another in imminent danger of death or serious bodily harm.	♦ $250,000 fine ♦ 15 years (2 yr. minimum)	Felony
Corporate Defendant	Greater of $1,000,000 fine or 3 times the economic benefit	

III. STATE WATER CONTROL LAW AND RELATED STATUTES (definitions, continued)

PROHIBITED ACT	MAXIMUM FINE & IMPRISONMENT	LEVEL
Subsequent Violations	Double Penalties	
§ 62.1-44.32(b) **Willfully** or negligently violate the Virginia State Water Control Law, or any regulation under the Law or condition of any certificate or order	♦ $25,000 ($2,500 minimum) ♦ 12 months jail	Misdemeanor
§ 62.1-44.33 Violate prohibition concerning discharges of sewage and other wastes from boats and vessels	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
Discharge of Oil		
§ 62.1-44.34:18 Discharge of oil prohibited; liability for permitting discharge.	(see 44.34:20)	(see 44.34:20)
§ 62.1-44.34:19 Reporting of discharge.	(see 44.34:20)	(see 44.34:20)
§ 62.1-44.34:20(E) **Knowingly** and willfully make any false statement, representation, or certification in any document filed or required under the article relating to discharge of oil (Title 62.1, Chapter 3.1, Article 11)	♦ $100,000/day ♦ 3 years (1 yr. minimum)	Felony
§ 62.1-44.34:20(E) **Knowingly** violate the article relating to discharge of oil, or any regulation or administrative or judicial order under the article, or term or condition of approval under it.	♦ $100,000/day ♦ 12 months jail	Misdemeanor
§ 62.1-44.34:20(E2) **Knowingly** and willfully discharge, or cause or permit discharge of oil into or upon state waters	♦ $100,000/day ♦ 10 years (1 yr. minimum)	Felony
§ 62.1-44.34:20(F) Penalty Enhancement: Following a conviction for under § 62.1-44.34:20(E2), any later violation of the article relating to the discharge of oil is punishable as a felony.	♦ $200,000/day ♦ 10 years (2 yr. minimum)	Felony
§ 62.1-44.34:20(E1) Negligently discharge, or cause or permit discharge of oil into or upon state waters	♦ $50,00/day ♦ 12 months jail	Misdemeanor
§ 62.1-44.34:20(G) Separate fine provision for corporate defendants	Greater of $1,000,000 fine or 3 times the economic benefit	
Virginia Groundwater Act		
§ 62.1-270(B) **Knowingly** violate the Virginia Groundwater Act (Title 62.1, Chapter 25), or any regulation under the Act, or any condition of any certificate or order, or cause or permit them to be violated, or **Knowingly** make any false statement in any form required to be submitted under the Chapter.	♦ $50,000/day ($5,000 minimum) [$10,000 minimum for corporate defendants] ♦ 3 years (1 yr. minimum) [or at the discretion of the court or jury, not more than 12 months]	Felony

III. STATE WATER CONTROL LAW AND RELATED STATUTES (definitions, continued)

PROHIBITED ACT	MAXIMUM FINE & IMPRISONMENT	LEVEL
§ 62.1-270(C) **Knowingly** violate the Virginia Groundwater Act, and **Knowing** at the time that the conduct places another in Imminent danger of death or serious bodily harm.	♦ $250,000 fine ♦ 15 years (2 yr. minimum)	Felony
Corporate Defendant:	Greater of $1,000,000 fine or 3 times the economic benefit	
Subsequent Violations	Double Penalties	
§ 62.1-270(B) **Willfully** or negligently violate the Virginia Groundwater Act, or any regulation under the Law, or any condition of any certificate or order, or cause or permit them to be violated.	♦ $25,000 ($2,500 minimum) ♦ 12 months jail	Misdemeanor
§ 62.1-194 Cast, throw, or dump solid waste, except fish or crab bait, into waters of the state	♦ $100 ♦ 30 days jail	Misdemeanor
§ 62.1-194.1 Dump, place, or put upon the banks or channels of state waters any noxious or other substance which may endanger, obstruct, impede, contaminate or substantially impair lawful use of such waters	♦ $500/day ($100/day minimum) ♦ 12 months jail	
§ 62.1-194.2 Throw or otherwise dispose of trash, debris, tree laps, logs, or fell timber, or make or cause obstruction for more than one week on any river, creek, stream, or swamp so as to obstruct free passage of vessels or fish	♦ $2,500 ♦ 12 months jail (§18.2-12)	Misdemeanor
§ 62.1-194.3 Dump, place, put, or cause any material to be put upon the banks of channel of the Big Sandy River or its tributaries (e.g., in Wise and Dickenson Counties) so as to fill or restrict the channels of flow	♦ $500/day ($100/day minimum) ♦ 12 months jail	Misdemeanor
§ 28.2-1318 **Knowingly**, intentionally, or negligently, violate any order, rule or regulation of the Commission or of a wetlands board, or violate the chapter regarding wetlands (Title 28.2, Chapter 13), or any wetlands zoning ordinance, or any provision of a wetlands permit. Following conviction, every day of the violation constitutes a separate offense.	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor

IV. MINING

PROHIBITED ACT	MAXIMUM FINE & IMPRISONMENT	LEVEL
§ 45.1-246 (E) **Willfully** and knowingly conduct surface coal mining or coal exploration without a valid permit or violate a condition of a permit; or fail to comply with regulations or orders	♦ $10,000 ♦ 12 months jail	Misdemeanor
§ 45.1-246 (G) **Willfully** and knowingly make any false statement, representation, or certification, or knowingly fails to make a truthful statement, representation, or certification, in any document filed or required under the mining laws	♦ $10,000 ♦ 12 months jail	Misdemeanor

V. PESTICIDES

PROHIBITED ACT	MAXIMUM FINE & IMPRISONMENT	LEVEL
§ 3.1-249.70(A) **Knowingly** violate any provision imposed by the chapter or rule or regulation on pesticide control	♦ $2,500 ♦ 12 months jail	Class 1 Misdemeanor
But if the violation causes death or serious physical harm	♦ $500,000 ♦ 12 months jail	

LISTED HAZARDOUS WASTES

Hazardous wastes are listed by the following codes:

D-LIST: "Characteristic" Hazardous Wastes, having one (or more) of the following characteristics:

1. Ignitability (EPA Hazardous Waste No. D001)

   Flash point $<140^{o}$ F

2. Corrosivity (EPA HW No. D002)

   Liquid with a pH < 2.0 or > 12.5

3. Reactivity (EPA HW No. D003)

   Materials, which are unstable in their normal state, such as explosives, materials, which form toxic gasses when mixed with water, or cyanide or sulfur compounds, which may generate toxic gasses.

4. Toxicity (EPA HW Nos. D004 - D043) [refer to page 1-19]

   Concentrations of specific contaminants greater than given in the TCLP table.

NOTE: The DCLS Hazardous Waste Determination Menu (included in Appendix 3), can be submitted with the desired chain of custody form to assist in the selection of hazardous waste parameters for analysis.

F-LIST: Hazardous Wastes from non-specific sources

K-LIST: Hazardous Wastes from specific sources

P-LIST: "Acute" Hazardous Wastes (discarded commercial products, etc.)

U-LIST: Hazardous Wastes (discarded commercial products, etc.)

Additional D-List Hazardous Wastes (D004 – D043)

MAXIMUM CONCENTRATION OF CONTAMINANTS FOR THE TOXICITY CHARACTERISTIC (TCLP)

EPA HW No.	Contaminant	Regulatory Level (mg/L)
D004	Arsenic	5.0
D005	Barium	100.0
D018	Benzene	0.5
D006	Cadmium	1.0
D019	Carbon tetrachloride	0.5
D020	Chlordane	0.03
D021	Chlorobenzene	100.0
D022	Chloroform	6.0
D007	Chromium	5.0
D023	o-Cresol	200.0
D024	m-Cresol	200.0
D025	p-Cresol	200.0
D026	Cresol	200.0
D016	2,4-D	10.0
D027	1,4-Dichlorobenzene	7.5
D028	1,2-Dichloroethane	0.5
D029	1,1-Dichloroethylene	0.7
D030	2,4-Dinitrotoluene	0.13
D012	Endrin	0.02
D031	Heptachlor (and its epoxide)	0.008
D032	Hexachlorobenzene	0.13
D033	Hexachlorobutadiene	0.5
D034	Hexachloroethane	3.0
D008	Lead	5.0
D013	Lindane	0.4
D009	Mercury	0.2
D014	Methoxychlor	10.0
D035	Methyl ethyl ketone	200.0
D036	Nitrobenzene	2.0
D037	Pentrachlorophenol	100.0
D038	Pyridine	5.0
D010	Selenium	1.0
D011	Silver	5.0
D039	Tetrachloroethylene	0.7
D015	Toxaphene	0.5
D040	Trichloroethylene	0.5
D041	2,4,5-Trichlorophenol	400.0
D042	2,4,6-Trichlorophenol	2.0
D017	2,4,5-TP (Silvex)	1.0
D043	Vinyl chloride	0.2

§ 27-15.1. Authority of chief or other officer in charge when answering alarm or operating at an emergency incident; penalty for refusal to obey orders.

While any fire department or fire company is in the process of answering an alarm or operating at an emergency incident where there is imminent danger or the actual occurrence of fire or explosion or the uncontrolled release of hazardous materials which threaten life or property and returning to the station, the chief or other officer in charge of such fire department or company at that time shall have the authority to: (i) maintain order at such emergency incident or its vicinity, (ii) direct the actions of the fire fighters at the incident, (iii) notwithstanding the provisions of §§ 46.2-888 through 46.2-891, keep bystanders or other persons at a safe distance from the incident and emergency equipment, (iv) facilitate the speedy movement and operation of emergency equipment and fire fighters, (v) cause an investigation to be made into the origin and cause of the incident, and (vi) until the arrival of a police officer, direct and control traffic in person or by deputy and facilitate the movement of traffic. The fire chief or other officer in charge shall display his fire fighter's badge, or other proper means of identification. Notwithstanding any other provision of law, this authority shall extend to the activation of traffic control signals designed to facilitate the safe egress and ingress of emergency equipment at a fire station. Any person or persons refusing to obey the orders of the fire chief or his deputies or other officer in charge at that time shall be guilty of a Class 4 misdemeanor. The chief or other officer in charge shall have the power to make arrests for violation of the provisions of this section. The authority granted under the provisions of this section may not be exercised to inhibit or obstruct members of law-enforcement agencies or rescue squads from performing their normal duties when operating at such emergency incident, nor to conflict with or diminish the lawful authority, duties and responsibilities of forest wardens, including but not limited to the provisions of Chapter 11 of Title 10.1. Personnel from the news media, such as the press, radio and television, when gathering the news may enter at their own risk into the incident area only when the officer in charge has deemed the area safe and only into those areas of the incident that do not, in the opinion of the officer in charge, interfere with the fire department or rescue workers dealing with such emergencies, in which case the chief or other officer in charge may order such person from the scene of the emergency incident.

§ 27-37.1. Right of entry to investigate releases of hazardous material, hazardous waste, or regulated substances.

The fire marshal shall have the right, if authorized by the governing body of the county, city, or town appointing the fire marshal, to enter upon any property from which a release of any hazardous material, hazardous waste, or regulated substance, as defined in § 10.1-1400 or § 62.1-44.34:8, has occurred or is reasonably suspected to have occurred and which has entered into the ground

water, surface water or soils of the county, city or town in order to investigate the extent and cause of any such release. If, in undertaking such an investigation, the fire marshal makes an affidavit under oath that the origin or cause of any such release is undetermined and that he has been refused admittance to the property, or is unable to gain permission to enter the property, any magistrate of the city or county where the property is located may issue an investigation warrant to the fire marshal authorizing him to enter such property for the purpose of determining the origin and source of the release. If the fire marshal, after gaining access to any property pursuant to an investigation warrant, has probable cause to believe that the release was caused by any act constituting a criminal offense, he shall stop the investigation until a search warrant has been obtained or consent to conduct the search has otherwise been given.

APPENDIX 2

FEDERAL LEGISLATION PROTECTING THE ENVIRONMENT

The **Clean Air Act** was enacted to prevent the deterioration of air quality (42 U. S. Code §§ 7401-7491). The Clean Air Act vests the EPA with the authority to control the emissions of pollutants from sources that cause or contribute to air pollution or could endanger human health. Substances identified as air pollutants include ozone, lead, sulfur dioxide, carbon monoxide, nitrogen dioxide, and particulate matter. Offenses include violating performance standards, violating emissions standards, releasing hazardous air pollutants in disregard of emission standards, making false statements in required documents, and tampering with required monitoring devices. (42 U. S. Code §§ 7413, 7414, 7420, and 7524.)

The **Clean Water Act** was enacted to restore and maintain the integrity of the Nation's waters and to regulate the sources of water pollution. (33 U. S. Code §§ 1261-1376.) Pursuant to the Clean Water Act, the discharging of pollutants into the navigable waters of the United States—including filling wetlands—requires a permit. Offenses include the unpermitted discharge of any pollutant into a waterway, discharging pollutants into a public waste water treatment facility in violation of pretreatment standards, failing to report the discharge of a reportable quantity of a hazardous substance, making false statements in required documents, and tampering with required monitoring devices. (33 U. S. Code §§ 1319 and 1321.)

The **Comprehensive Environmental Response, Compensation, and Liability Act** (CERCLA) addresses the problem of abandoned hazardous waste sites—specifically the cleanup of these waste sites. CERCLA also contains provisions that regulate uncontrolled releases of hazardous substances into the environment. (42 U. S. Code §§ 9601-9675.) CERCLA requires the notification of the Federal National Response Center when there has been a release of a reportable quantity of a hazardous substance. Offenses include failing to notify of the release of a reportable quantity of a hazardous substance, destroying or making false statements on required documents. (42 U. S. Code § 9603.)

The **Resource Conservation and Recovery Act** (RCRA) was enacted to protect human health and the environment from the dangers associated with waste management and disposal and to encourage the conservation and recovery of natural resources through reuse, recycling, and waste minimization. (42 U. S. Code § 6902.) RCRA requires cradle-to-grave management of hazardous waste by imposing requirements on generators and transporters of hazardous waste as well as storage, treatment, and disposal facilities. (42 U. S. Code §§ 6901-6987.) Offenses include knowingly transporting hazardous waste to an unpermitted facility, transporting hazardous waste without the required manifest, treating, storing or disposing of hazardous waste without a permit or in violation of a permit, making false statements in required documents, exporting hazardous waste to another country without its consent or in violation of an international agreement. (42 U. S. Code § 6928.)

The **Toxic Substances Control Act** (TSCA) regulates chemical substances to which the public or environment may become exposed. TSCA authorizes the EPA to prohibit the manufacture, processing, or distribution of a substance, prohibit certain uses of a substance, or regulate the disposal of certain substances. (15 U. S. Code §§ 2601-2871.) Offenses include failing to place warning labels on products containing certain hazardous substances or mixtures, improper storage or disposal of certain hazardous substances, and failing to maintain proper records regarding the removal, storage, or disposal of certain hazardous substances. (U. S. Code §§ 2614-2615.)

The **Act to Prevent Pollution by Ships** (APPS) implements the International Convention for the Prevention of Pollution of Ships. (33 U. S. Code §§ 1901-1950). The international convention addresses the discharge of oil, noxious liquids, harmful substances carried in packaged form, sewage, and garbage into the oceans. Pursuant to APPS, seagoing ships are prohibited from disposing of plastics anywhere in the oceans, disposing of dunnage and other packing material within 25 miles of nearest land, and disposing of food materials within 12 miles. (33 U. S. Code §§ 1907-1908.)

The **Emergency Planning and Community Right-to-Know Act** (EPCRA) was enacted to ensure that emergency response officials are cognizant of hazardous substances in communities (42 U. S. Code §§ 11001-11050). EPCRA requires facilities handling hazardous substances to submit a chemical inventory to State and local emergency planning units. In the case of accidental releases, EPCRA requires operators to notify emergency planning units. Failure to notify officials of hazardous substances may result in civil penalties. Failure to notify of a release involving an “extremely hazardous substance” is a felony offense. Extremely hazardous substances are identified at 40 CFR Part 355.

Other laws enacted to protect the environment from pollution include the Rivers and Harbors Act, the Safe Drinking Water Act, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Hazardous Materials Transportation Statute, the National Environmental Policy Act, and the Marine Protection Research and Sanctuary Act.

APPENDIX 3

Division of Consolidated Laboratory Services (DCLS)

HAZARDOUS WASTE DETERMINATION MENU

The DCLS Hazardous Waste Determination Menu (included on the following page),
can be submitted with the desired chain of custody form to assist in the selection of hazardous waste parameters for analysis.

APPENDIX 4

COPIES OF CHAIN OF CUSTODY FORMS

Department of Environmental Quality

Copy of Chain of Custody Record
(original is a 3-part form)

Division of Consolidated Laboratory Services

Copy of Laboratory Chain of Custody form
(original is a 2-sided form)